

IN THE CLAIMS

The following is a complete listing of the claims in the application including the present status thereof and including any amendments made by this paper. Any claims canceled or withdrawn from consideration are done so without disclaimer of any subject matter therein, the applicants reserving the right to pursue such claims in continuing or divisional applications. By this paper, claims 59 and 64-66 have been amended.

Listing of claims:

1-51(canceled).

52(previously presented). An electrical cardiac stimulation system as in claim 65 wherein the electrical stimulus conducts electrically between an atrial tip electrode and the housing.

53(previously presented). An electrical cardiac stimulation system as in claim 65 wherein the electrical stimulus conducts electrically between a ventricular tip electrode and the housing.

54-55(canceled).

56(previously presented). An electrical cardiac stimulation system as in claim 66 wherein the signal associated with the evoked response is sensed between an atrial ring electrode and a ventricular electrode.

57(previously presented). An electrical cardiac

stimulation system as in claim 66 wherein the electrical stimulus conducts electrically between an atrial tip electrode and the housing.

58(previously presented). An electrical cardiac stimulation system as in claim 66 wherein the electrical stimulus conducts electrically between a ventricular tip electrode and the housing.

59(currently amended). An electrical cardiac stimulation system as in claim 65 further comprising a superior vena cava coil electrode and wherein the signal associated with the evoked response can be selectively sensed between any one of a group of combinations of electrodes consisting of an atrial ring electrode to ventricular ring electrode, atrial ring electrode to can electrode, atrial ring electrode to ventricle coil electrode, atrial ring electrode to superior vena cava coil electrode, atrial tip electrode to ventricular coil electrode, atrial tip electrode to ventricular tip electrode, atrial tip electrode to atrial ring electrode, superior vena cava coil electrode to atrial tip electrode, superior vena cava coil electrode to ventricular coil electrode, superior vena cava coil electrode to ventricular tip electrode, ventricular tip electrode to ventricular coil electrode, superior vena cava coil electrode to ventricular ring electrode, and ventricular ring electrode to ventricular coil electrode.

60-63(canceled).

64(currently amended). A method of automatically determining whether an electrical stimulus evokes a response in the heart when the stimulus is applied by a cardiac electrical stimulation system having atrial and ventricular leads, a pulse generator, and a sensing circuit, said method comprising the steps of:

- (a) providing an electrical stimulus to at least one of an atrium or ventricle of a heart;
- (b) attenuating afterpotential associated with said electrical stimulus;
- (c) selectively sensing an evoked response by the heart to the electrical stimulus, wherein a signal associated with an evoked response from the electrical stimulus is sensed between ~~selected~~ electrodes selected from the group, including ~~at least one of an atrial electrode electrodes~~ and a ventricular ~~electrode electrodes~~ of said leads wherein one of said electrodes selected is an atrial electrode and one of said electrodes is a ventricular electrode; and
- (d) wherein said atrial lead includes ~~at least one of~~ an atrial tip electrode and an atrial ring electrode, and said ventricular lead includes ~~at least one of~~ a ventricular tip electrode, a ventricular coil electrode, and a ventricular ring electrode.

65(currently amended). An electrical cardiac stimulation

system having an autocapture/stimulation/sensing configuration for use with atrial and ventricular leads, said electrical cardiac stimulation system including:

- (a) a ~~selected~~ combination of electrodes selected from a plurality of possible combinations of electrodes, at least one electrode of each said combination being selected from groups consisting of a plurality of atrial electrodes and a plurality of ventricular electrodes and at least one electrode of said combination optionally being selected from groups consisting of can electrodes and vena cava electrodes;
- (b) a stimulation system enclosed in a housing, said stimulation system being electrically coupled to each said atrial electrode and each said ventricular electrode for providing an electrical stimulus to at least one of an atrium or ventricle of a heart;
- (c) a sensing circuit that senses an evoked response by the heart to the electrical stimulus, wherein a signal associated with an evoked response from the electrical stimulus is sensed between at least two of said electrodes of said combination and when said sensing ~~means~~ circuit is adapted to selectively sense evoked responses between all combinations of any two of said electrodes;
- (d) an afterpotential attenuation device for attenuating

afterpotentials which result due to the application of the pacing stimulus to the heart by said electrical stimulation system, said afterpotential attenuation device being electrically coupled to said stimulation system;

- (e) an atrial lead including ~~at least one~~ a plurality of atrial ~~electrode~~ electrodes, said ~~at least one~~ atrial ~~electrode~~ electrodes ~~being selected from the group consisting of at least one of~~ including an atrial tip ~~electrodes~~ electrode and an atrial ring ~~electrodes~~ electrode; and
- (f) a ventricular lead including ~~at least one~~ a plurality of ventricular ~~electrode~~, said ~~at least one~~ ventricular ~~electrode~~ being selected from the group consisting of ~~at least one of~~ electrodes including a ventricular tip ~~electrodes~~ electrode, a ventricular coil ~~electrodes~~ electrode, and a ventricular ring ~~electrodes~~ electrode.

66(currently amended). An electrical cardiac stimulation system having an autocapture stimulation/sensing configuration for use with atrial and ventricular leads, said electrical cardiac stimulation system including:

- (a) a ~~selected~~ combination of electrodes selected from a plurality of possible combinations of electrodes, at least one electrode of each said combination being selected from groups consisting of a plurality of

- atrial electrodes and a plurality of ventricular electrodes and at least one electrode of said combination optionally being selected from groups consisting of can electrodes and vena cava electrodes;
- (b) a stimulation means enclosed in a housing, said stimulation means being electrically coupled to each said atrial electrode and each said ventricular electrode for providing an electrical stimulus to at least one of an atrium or ventricle of a heart;
- (c) a sensing means that senses an evoked response by the heart to the electrical stimulus, wherein a signal associated with an evoked response from the electrical stimulus is sensed between at least two of said electrodes of said combination and when said sensing means is adapted to selectively sense evoked responses between all combinations of any two of said electrodes;
- (d) an afterpotential attenuation means for attenuating afterpotentials which result due to the application of the pacing stimulus to the heart by said electrical stimulation means, said afterpotential attenuation means being electrically coupled to said stimulation means;
- (e) an atrial lead including ~~at least one~~ a plurality of atrial electrode electrodes including, ~~said at least one atrial electrode being selected from the group~~

~~consisting of at least one of an~~ atrial tip electrodes
~~electrode~~ and ~~an~~ atrial ring ~~electrodes~~ electrode; and
(f) a ventricular lead including ~~at least one~~ a plurality
of ventricular electrodes including, ~~said at least one~~
~~atrial electrode being selected from the group~~
~~consisting of at least one of a~~ ventricular tip
~~electrodes~~ electrode, a ventricular coil electrodes
electrode, and a ventricular ring ~~electrodes~~ electrode.